

AMENDMENTS TO THE CLAIMS

The following claim set replaces all prior versions of the claims.

1. (Canceled)
2. (Withdrawn) A method for detecting milk allergens wherein a monoclonal antibody recognizing native milk allergens and a monoclonal antibody recognizing denatured milk allergens are used in combination.
3. (Canceled)
4. (Withdrawn) The method for detecting milk allergens according to claim 2, wherein the monoclonal antibody recognizing native milk allergens and/or denatured milk allergens is an anti- α s1 casein monoclonal antibody.
5. (Withdrawn) The method for detecting milk allergens according to claim 4, wherein the anti- α s1 casein monoclonal antibody recognizes a native α s1 casein, an urea-treated α s1 casein, a native sodium casein and a denatured sodium casein.
6. (Canceled)
7. (Withdrawn) The method for detecting milk allergens according to claim 4, wherein the anti- α s1 casein monoclonal antibody is the anti- α s1 casein monoclonal antibody Pas1CN1 produced by hybridoma (FERM ABP-10263) and/or the anti- α s1 casein monoclonal antibody Pas1CN2 produced by hybridoma (FERM ABP-10264).
8. (Canceled)

9. (Withdrawn) The method for detecting milk allergens according to claim 2, wherein the monoclonal antibody recognizing native milk allergens and/or denatured milk allergens is an anti- β -lactoglobulin monoclonal antibody.
10. (Withdrawn) The method for detecting milk allergens according to claim 9, wherein the anti- β -lactoglobulin monoclonal antibody recognizes a native β -lactoglobulin, an urea-treated β -lactoglobulin, and a reduced-carboxymethylated β -lactoglobulin.
11. (Withdrawn - currently amended) The method for detecting milk allergens according to claim 9, wherein the anti- β -lactoglobulin monoclonal antibody is the anti- β -lactoglobulin monoclonal antibody P β GL1 produced by hybridoma (FERM ABP-10281) and/or the anti- β -lactoglobulin monoclonal antibody P β GL2 produced by ~~hybridoma~~ hybridoma (FERM ABP-10282) and/or the anti- β -lactoglobulin monoclonal antibody P β GL3 produced by ~~hybridoma~~ hybridoma (FERM ABP-10283).
12. (Canceled)
13. (Withdrawn) The method for detecting milk allergens according to claim 2, wherein a casein and/or a whey protein is extracted with the use of urea and 2-mercaptoethanol from a sample.
- 14-102. (Canceled)
103. (Currently amended) A method for detecting albumen allergens in a sample, ~~wherein denatured albumen allergens in the sample are detected by sandwich ELISA, using two types of anti-ovalbumin monoclonal antibodies, a first and a second monoclonal antibody, recognizing a reduced-carboxymethylated ovalbumin, each antibody recognizing a different epitope, which method comprises the following steps (a) to (c):~~
- (a) preparing an immune complex by allowing an albumen allergen in the sample to contact the a first anti-ovalbumin anti-native ovalbumin monoclonal antibody, recognizing a native ovalbumin, bound to an insolubilized carrier, and a first anti-reduced carboxymethylated

ovalbumin monoclonal antibody, recognizing a denatured ovalbumin, bound to an insolubilized carrier to trap the albumen allergen in the sample;

(b) preparing a labeled immune complex by allowing the immune complex prepared in step (a) to contact the labeled a labeled second anti-ovalbumin anti-native ovalbumin monoclonal antibody recognizing a native ovalbumin and a labeled second anti-reduced carboxymethylated ovalbumin monoclonal antibody recognizing a denatured ovalbumin to react with the albumen allergen in the sample trapped by the first anti-ovalbumin monoclonal antibody, wherein the second monoclonal antibody recognizing a native ovalbumin recognizes a different epitope of native ovalbumin than the epitope recognized by the first monoclonal antibody recognizing a native ovalbumin, and the second monoclonal antibody recognizing a denatured ovalbumin recognizes a different epitope of denatured ovalbumin than the epitope recognized by the first monoclonal antibody recognizing denatured ovalbumin; and

(c) analyzing the albumen allergen in the sample qualitatively and quantitatively detecting native and denatured albumen allergen in the sample by detecting the labeled immune complex prepared in step (b).

104. (Currently amended) A method for detecting albumen allergens in a sample, ~~wherein denatured albumen allergens in a sample are detected by immunochromatography using two types of anti-ovalbumin monoclonal antibodies, a first and a second monoclonal antibody, recognizing a reduced carboxymethylated ovalbumin, each recognizing a different epitope,~~ which method comprises the following steps (a) to (c):

(a) preparing an antigen-antibody complex in which the albumen allergen is bound to the first anti-ovalbumin monoclonal antibody, labeled with gold colloid by allowing an albumen allergen in the sample to contact a first anti-native ovalbumin monoclonal antibody recognizing a native ovalbumin and a first anti-reduced carboxymethylated ovalbumin monoclonal antibody recognizing a denatured ovalbumin, wherein each of the first monoclonal antibodies is labeled with gold colloid;

(b) allowing the antigen-antibody complex to move on a test strip by capillary action; and

(c) analyzing qualitatively the albumen allergen according to detecting native and denatured albumen allergen in the sample by the presence or absence of a colored line appearing on the test strip by a trapping of the antigen-antibody complex by the a fixed second anti-

~~ovalbumin~~ anti-native ovalbumin monoclonal antibody recognizing a native ovalbumin and a second anti-reduced carboxymethylated ovalbumin monoclonal antibody recognizing a denatured ovalbumin, wherein the second monoclonal antibody recognizing a native ovalbumin recognizes a different epitope of native ovalbumin than the epitope recognized by the first monoclonal antibody recognizing a native ovalbumin, and the second monoclonal antibody recognizing a denatured ovalbumin recognizes a different epitope of denatured ovalbumin than the epitope recognized by the first monoclonal antibody recognizing denatured ovalbumin, and the second monoclonal antibodies are fixed in advance at a given position on the test strip.

105. (Currently amended) The method for detecting albumen allergens according to claim 103, wherein

the anti-ovalbumin monoclonal antibodies recognizing a native ovalbumin are the anti-ovalbumin monoclonal antibody PNOA1 produced by the hybridoma of Accession No: FERM BP-10265 and the anti-ovalbumin monoclonal antibody PNOA2 produced by the hybridoma of Accession No: FERM BP-10266; and

the anti-ovalbumin monoclonal antibodies recognizing a reduced carboxymethylated ovalbumin are the anti-ovalbumin monoclonal antibody PDOA1 produced by the hybridoma of Accession No: (FERM BP-10275) and/or the anti-ovalbumin monoclonal antibody PDOA2 produced by the hybridoma of Accession No: (FERM BP-10276).

106. (Withdrawn) A method for detecting flour allergens, wherein an anti-flour gliadin monoclonal antibody recognizing a native flour gliadin and a flour gliadin solubilized with a denaturant is used.

107. (Withdrawn) The method for detecting flour allergens according to claim 106, wherein the anti-flour gliadin monoclonal antibody recognizes a native flour gliadin, a reduced-carboxymethylated flour gliadin, a flour gliadin solubilized with 0.1 M acetate, a flour gliadin solubilized with 70% ethanol, and a flour gliadin solubilized with a denaturant.

108. (Withdrawn) A method for detecting buckwheat allergens, wherein an anti-buckwheat crude protein monoclonal antibody recognizing a native buckwheat crude protein and a heat-denatured buckwheat crude protein is used.

109. (Withdrawn) The method for detecting buckwheat allergens according to claim 108, wherein the anti-buckwheat crude protein monoclonal antibody recognizes a 24Da protein and a heat-denatured buckwheat crude protein, or an anti-buckwheat crude protein monoclonal antibody recognizing a 76kDa protein and a native buckwheat crude protein.

110. (Withdrawn) A method for detecting peanut allergens, wherein an anti-Ara h1 protein monoclonal antibody recognizing a native peanut Ara h1 protein and a heat-denatured peanut Ara h1 protein is used.

111. (Withdrawn) The method for detecting peanut allergens according to claim 110, wherein the anti-Ara h1 protein monoclonal antibody recognizes a native Ara h1 protein and a native peanut crude protein, and/or an urea-treated Ara h1 protein and an urea-treated peanut crude protein.

112. (Currently amended) The method for detecting albumen allergens according to claim 104, wherein

the anti-ovalbumin monoclonal antibodies recognizing a native ovalbumin are the anti-ovalbumin monoclonal antibody PNOA1 produced by the hybridoma of Accession No: FERM BP-10265 and the anti-ovalbumin monoclonal antibody PNOA2 produced by the hybridoma of Accession No: FERM BP-10266; and

the anti-ovalbumin monoclonal antibodies recognizing a reduced carboxymethylated ovalbumin are the anti-ovalbumin monoclonal antibody PDOA1 produced by the hybridoma of Accession No: (FERM BP-10275) and/or the anti-ovalbumin monoclonal antibody PDOA2 produced by the hybridoma of Accession No: (FERM BP-10276).